

ABSTRACT OF THE DISCLOSURE

A catalyst component for addition polymerization
5 containing (A) a compound containing an atom of the Group
II to the Group XII or Lanthanide series in which the
lowest energy level of unoccupied molecular orbital
having the valence p-type atomic orbital of the atom of
the Group II to the Group XII or Lanthanide series as
10 a main component, wherein the coefficient represented
by a linear combination, is 0.4 or more) is calculated
to be 0.008 atomic unit (Hartree) or less by the
calculation of density functional method (B3LYP/3-21G
level), a catalyst for addition polymerization
15 containing the same, and a process for producing an
addition polymer with the catalyst.